

REMARKS

This Amendment is filed in response to the FINAL Office Action mailed on August 26, 2004; in response to the Advisory Action responding to Applicant's Rule 116 Amendment; and in the Request for Continued Examination (RCE) filed on even date herewith. All objections and rejections are respectfully traversed.

Claims 1- 28 are in the case.

No Claims were added.

No Claims were amended.

Please enter and consider the Amendment filed on October 4, 2004, under 37 C.F.R. § 1.116 (Rule 116). The original claims presented hereinabove are in the form presented in the Rule 116 Amendment filed on October 4, 2004.

In Paragraph 2 of the FINAL Office Action mailed on August 26, 2004, claims 1-4, 7, 8, 13-16, 19, 23, 25-27 were rejected under 35 U.S.C. § 102(b) as being anticipated by Chu et al. U. S. Patent No. 6,346,954 issued February 12, 2002.

The present invention, as set forth in representative claim 1, comprises in part:

1. A system for reporting information related to predetermined storage volumes in a network including at least one storage appliance comprising:
 - a monitor process that identifies *volumes* and retrieves *statistical information with respect to the volumes*;
 - an interface adapted to enable volumes to be associated with a group; and
 - a reporting process that organizes and displays the *statistical information with respect to the volumes* associated with the group to interested parties.

Chu discloses a method for managing a number of disk drives connected as a single RAID system. Chu's management system permits him to display available physical drives in a tree frame, open an array frame, select a stripe size, select a subset of physical drives for an array frame, display unusable space on each physical drive, add logical drives to an array frame, adjust the size of logical drives, select a data distribution mode for each logical drive, monitor operating status of the data storage system, and display status of physical drives in a selected open array frame. (See Fig. 4 of Chu).

In the Advisory Action mailed on December 7, 2004, the Examiner states, at the continuation of item 5:

“Applicant argues based on a careful reading of the Specification, a Volume is a logical construct, which embraces a plurality of disk drives. However, each claim is to be construed based on its broadest interpretation, and the claim language in claim 1 only calls for “statistical informa-

tion with respect to the volumes”, which can be interpreted to be storage space that is available within each disk drive.”

Applicant respectfully notes that even if Applicant’s “statistical information” includes “storage space that is available within each disk drive”, that Chu is legally precluded from anticipating Applicant’s claimed novel invention, because Applicant’s claimed *volume* is a logical construct entirely absent from the Chu disclosure.

Applicant respectfully urges that for a cited reference to anticipate a claimed invention under 35 U.S.C. § 102 (b), that the reference must disclose all claimed elements of Applicant’s invention. Chu does not disclose *volumes*. Accordingly, Chu is legally precluded from anticipating Applicant’s claimed novel invention under 35 U.S.C. § 102(b), because of the absence from Chu of Applicant’s claimed novel *volumes*.

The nature of Applicant’s claimed novel volumes was set out in the Amendment filed on May 3, 2004, as follows.

Applicant’s *volumes* are identified in the Specification as comprising one or more RAID groups:

A filer is organized so that it includes one or more of storage “volumes” that comprise a cluster of physical storage disks, defining an overall logical arrangement of storage space. Currently available filer implementations can serve a large number of discrete volumes (for example 150, al-

though this number is subject to increase). Each volume is generally associated with its own file system (WAFL for example). The disks within a volume/file system are typically organized as one or more groups of Redundant Array of Independent (or *Inexpensive*) Disks (RAID). RAID implementations enhance the reliability/integrity of data storage through the redundant writing of data “stripes” across a given number of physical disks in the RAID group, and the appropriate caching of parity information with respect to the striped data. In the example of a WAFL-based file system, a RAID 4 implementation is advantageously employed. This implementation specifically entails the striping of data across a group of disks, and separate parity caching within a selected disk of the RAID group. (Specification page 2 lines 1 - 13)

Further, Applicant’s *volumes* can be consolidated into arbitrary groups, as explained in the Specification:

This invention overcomes the disadvantages of the prior art by providing a system and method for enabling one or more storage volumes and associated devices on one or more storage appliances (filers) to be combined or consolidated into arbitrary groups so that statistical information related to performance, operational status and other usage-based parameters can be provide to interested parties associate with the group. The volumes can be drawn from different storage appliances, and their statistical information can be grouped/consolidated so as to allow administration and access by a common group of administrators or users.

According to a preferred embodiment, the grouping of volumes is controlled via a management station that is attached to the network containing the volumes. The management station includes a graphical user interface that allows the groups to be organized and displayed. A monitor process polls the volumes and devices for statistical information and returns it to the management station. There is a database that stores information about users in the group and various threshold values that are associated with the statistical information. The monitor process compares the thresholds to the monitored statistical information and determines whether an event has occurred. If an event has occurred, then the monitor process notifies an event process that determines whether there are listed any interested parties in the event, and, if so, how to notify the parties. In a typical form of notification, the event process can e-mail at least some of the interested parties in the group (e.g. users, administrators, managers) if an

event has occurred. Similarly, the notification can take the form of an alarm, alert, telephone call or page to an interested party that is implemented through appropriate automated systems. There is also a command process that generates displays on the statistical information using, preferably a web-based format that is accessed by a browser on the management station's graphical user interface or on an interested party's client display.

(Specification page 3 line 14 - page 4 line 9)

That is, Applicant's file system: "is organized so that it includes one or more storage 'volumes' that comprise a cluster of physical storage disks", and a "cluster of physical storage disks" are arranged as: "The disks within a volume/file system are typically organized as one or more groups of Redundant Array of Independent (or *Inexpensive*) Disks (RAID)." (Specification page 2 lines 1-2, and lines 5-7, quoted hereinabove)

Further, Applicant's *volumes* may be *associated with a group* of *volumes* as explained in the Specification as: "This invention overcomes the disadvantages of the prior art by providing a system and method for enabling one or more storage volumes and associated devices on one or more storage appliances (filers) to be combined or consolidated into arbitrary groups so that statistical information related to performance, operational status and other usage-based parameters can be provide to interested parties associate with the group." (Specification page 3 lines 14-18, and quoted above)

Accordingly, Applicant claims a system having volumes supported by one or more RAID groups, and the volumes may be associated with groups of volumes.

In contrast with Chu's single RAID system, Applicant claims management of a much more complicated system which uses one or more groups of RAID systems to support a volume, and one or more volumes *may be associated with a group* of volumes. That is, Chu has no disclosure of Applicant's claimed *volumes* and has no disclosure of Applicant's claimed *groups* of volumes

Accordingly, Applicant respectfully urges that Chu has no disclosure of Applicant's claimed novel method that *identifies volumes and retrieves statistical information with respect to the volumes . . . enable volumes to be associated with a group . . . and a reporting process that organizes and displays the statistical information with respect to the volumes associated with the group to interested parties* . That is, Chu is totally silent concerning Applicant's large scale constructs of *volumes* and *groups* which may comprise one or more RAID systems, as Chu's disclosure is simply restricted to one RAID system.

Further, the point that Chu is legally precluded from anticipating the presently claimed invention was further set out in the Amendment under 37 C.F.R. § 1.116 filed on October 4, 2004, as follows.

Applicant respectfully notes that a “volume”, as set forth in the present specification, drawings, and claims is not “storage space within each disk drive”. A volume is a logical concept that usually embraces a plurality of disk drives. For example a set of a plurality of disk drives may store a plurality of logical volumes. See Specification at page 2 lines 1-3, which state:

“A filer is organized so that it includes one or more of storage “volumes” that comprise a cluster of physical storage disks, defining an overall logical arrangement of storage space.”

Applicant’s Amendment filed on May 3, 2004, has a thorough discussion of the nature of a “volume”. From a careful reading of the parts of the Specification quoted in the Amendment filed May 3, 2004, it is clear that a volume is a logical construct which embraces a plurality of disk drives. A “volume” certainly is not, as the Examiner asserts, “storage space within each disk drive.”

As set out in representative claim 1, Applicant claims *a monitor process that identifies volumes and retrieves statistical information with respect to the volumes*. Chu is silent concerning the logical concept of “volumes”. Applicant claims *a monitor process that identifies volumes*. Accordingly, Applicant respectfully urges that Chu has no disclosure of Applicant’s claimed novel monitoring of volumes.

Accordingly, Applicant respectfully urges that Chu is legally precluded from anticipating Applicants claimed novel invention under 35 U.S.C. § 102 because of the absence from Chu of Applicant's claimed novel *a monitor process that identifies volumes and retrieves statistical information with respect to the volumes*.

Accordingly, Applicant urges that the absence of any concept of Applicant's claimed *volume* in Chu legally precludes Chu from anticipating Applicant's claimed novel invention under 35 U.S.C. § 102(b).

At Page 6 of the FINAL Office Action mailed on August 26, 2004, Claims 5-6, 9-12, 17-18, 22, 24 and 28 were rejected under 35 U.S.C. § 103(a) over Chu.

Applicant respectfully notes that Claims 5-6, 9-12, 17-18, 22, 24 and 28 are dependent claims, and that these dependent claims are dependent from independent claims believed to be in condition for allowance. Accordingly, Claims 5-6, 9-12, 17-18, 22, 24 and 28 are believed to be in condition for allowance.

All independent claims are believed to be in condition for allowance.

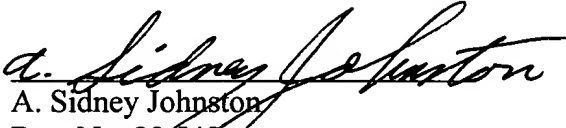
All dependent claims are believed to be dependent from allowable independent claims, and therefore in condition for allowance.

Favorable action is respectfully solicited.

Please charge any additional fee occasioned by this paper to our Deposit Account

No. 03-1237.

Respectfully submitted,


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